

to re-certify) that the LEC services are being provided as ordered.⁵⁶

With respect to fraudulent international in-collect calls, APCC (p. 22), BellSouth (p. 9) and Sprint (p. 12) all acknowledge that the TFPC proposal endorsed by AT&T (p. 27) is an equitable means of sharing responsibility for such calls. By requiring all payphone operators to obtain line numbers in the 8000-9000 series and to order BNS on their lines, those entities can have a reasonably defined safe haven from fraud responsibility. At the same time, IXCs who accept in-collect calls will be required to make BNS queries on a reasonably limited number of calls in order to protect themselves from fraud losses.⁵⁷

The situation is very different for payphone fraud involving direct-dialed calls.⁵⁸ Blocking of direct-dialed calls takes place in the phone sets themselves⁵⁹ or in the

⁵⁶ If the Commission allows some small LECs not to offer certain fraud protection services (see USTA, p. 4), PPOs should be informed of the lack of such services. They should then be required to decide whether to protect themselves through other means, or to assume the business risk of providing service without the LEC capabilities.

⁵⁷ Under the TFPC proposal, all payphones would be insulated from fraudulent in-collect calls, whether perpetrated by remote clip-on fraud or not (see IPANY, p. 12 n.7).

⁵⁸ See AT&T, pp. 20-23.

⁵⁹ APCC's assertion (p. 9) that CPE-based fraud protections are "inherently flawed" should not relieve payphone providers from liability for fraud originating at their phones. If anything, this statement demonstrates that PPOs may need additional incentives to demand better

LECs' networks. Thus, the blocking capabilities that prevent fraudulent direct-dialed calls from payphones do not involve interaction with the IXCs' networks.⁶⁰ Furthermore, as with PBX fraud, IXCs do not know whether any specific call is fraudulent. As a result, contrary to APCC's suggestion (p. 19), PPOs should not be absolved of all responsibility for IXC charges on direct-dialed calls solely because they subscribe to a LEC blocking service.⁶¹

(footnote continued from previous page)

fraud protection capabilities from their equipment vendors. PPOs should not be permitted to attach inadequately protected equipment to the public network and expect other carriers and their customers to bear the fraud risks.

⁶⁰ Other types of direct-dial payphone fraud also have no relationship to IXCs. In particular, "clip-on" fraud involves an invasion of the line between the payphone and the LEC central office. The invasion may occur on either the payphone operator's or the LEC's side of the demarcation point, but in all cases the IXC is not involved (see MCI, pp. 14-15). There is no reason to penalize an IXC for fraud which it has no power to control. AT&T does, however, support APCC's suggestion (p. 22) that LECs should be required to make reasonable efforts to place network interfaces for private payphones in secure locations.

⁶¹ AT&T believes that the Commission should investigate the feasibility of including calls to area code 809 in LEC international blocking services and the possibility of developing LEC monitoring services for calls from payphones (see APCC, p. 19; IPANY, p. 19). If such capabilities could be implemented in a timely and cost-effective way they could provide significant additional fraud prevention benefits. In addition, AT&T supports APCC's request (pp. 20-21) that the LECs undertake more efforts to reduce opportunities for dial tone re-origination, because this condition is now recognized

(footnote continued on following page)

Responsibility for direct-dialed calls properly lies, in the first instance, with the payphone provider, who is the only entity with direct control over the placement and operation of the equipment used to generate the fraudulent calls. If, however, the fraud results from a failure in a timely ordered LEC blocking service, the LEC should ultimately be responsible to reimburse the payphone operator for the IXC charges on such calls, irrespective of any limitations of liability in its tariffs. As noted above, any other result would jeopardize the policies which underlie the Commission's decision to require the LECs to provide such services.

IV. CELLULAR CARRIERS ARE ENTITLED TO ADDITIONAL REGULATORY AND LEGAL PROTECTIONS AGAINST FRAUD PERPETRATORS, BUT THEY SHOULD ULTIMATELY BE RESPONSIBLE FOR FRAUD ASSOCIATED WITH THE USE OF THEIR SYSTEMS.

The commenters generally agree with AT&T (p. 30) that cellular carriers have significant incentives to control fraud generated through the use of cellular equipment.⁶² They also join in AT&T's support (id.) for the Commission's proposed changes to Part 22 that would make

(footnote continued from previous page)

as a contributing factor in a number of CPE fraud situations.

⁶² See CTIA, p. 3 n.4; GTE, p. 14; RTC, p. 10 n.20.

counterfeiting of Electronic Serial Numbers ("ESNs") more difficult.⁶³

In addition, McCaw (p. 11) requests clarification that existing rules prohibit the creation of cellular "extension phones," because cellular carriers cannot distinguish between calls placed from legitimate extensions and those placed from phones using fraudulent ESNs. Bell Atlantic (p. 11) also recommends that the Commission adopt rules that will limit the manufacture and sale of devices used to "read" ESN/MIN. AT&T supports the objective of both of these requests. As McCaw (p. 8) and CTIA (p. 5) explain, unique electronic identifiers are necessary for effective validation and billing of cellular calls. The Commission should therefore adopt rules providing cellular carriers with reasonable assurance that each call represents a legitimate request for service from a bona fide customer.

AT&T also supports the cellular carriers' requests for new legislation to clarify that theft of cellular and other wireless services is a crime.⁶⁴ The Commission should

⁶³ Vanguard, p. 9; Bell Atlantic, p. 11; BellSouth, p. 11. CTIA (p. 9) and SBC (pp. 9-10) also support these changes, and appropriately note the need for clarifying language that will permit legitimate repair activities. Sprint (pp. 12-13) and NYNEX (p. 23) propose additional requirements for cellular phone design. AT&T recommends that these matters should be addressed in further proceedings in CC Docket No. 92-115.

⁶⁴ See AT&T, p. 38; CTIA, pp. 9-10; Vanguard, p. 11; McCaw, p. 17; Bell Atlantic, p. 11; GTE, p. 15; SBC, p. 9.

use its offices to recommend specific federal legislation that would make it a crime for anyone other than authorized repair persons to alter or copy the electronic identifiers of wireless CPE, even in the absence of any specific intent to defraud. Similarly, the Commission should help develop new laws that would make it a crime for unauthorized persons to manufacture or possess the electronic "burglar tools" used to commit cellular fraud, including scanning receivers.⁶⁵ McCaw (p. 17) appropriately notes that any new criminal statutes should be broadly worded, in order to encompass new technologies and to avoid creating loopholes that can be exploited by fraud perpetrators.⁶⁶

Most of the cellular commenters support the principle that liability for fraud losses resulting from the use of cellular telephones should lie with the entity best able to control,⁶⁷ monitor⁶⁸ or prevent⁶⁹ such fraud. When fraud involves a non-equal access cellular carrier, CTIA (p. 13) and McCaw (pp. 13-14) correctly acknowledge that the cellular carrier itself should be responsible for all

⁶⁵ See NYNEX, p. 24.

⁶⁶ The Commission should also work with state regulators on similar state statutes (see CTIA, p. 10 n.15).

⁶⁷ CTIA, p. 2; SNET, p. 9.

⁶⁸ McCaw, p. 2.

⁶⁹ Vanguard, p. 6.

losses, including IXC charges.⁷⁰ These commenters contend, however, that if fraud occurs in an equal access environment, the cellular carrier should be responsible to cover only the costs of airtime, and the IXC should bear the losses on its own service.

CTIA and McCaw base their argument on the claim that IXCs serving equal access cellular carriers can effectively validate,⁷¹ or validate and monitor,⁷² fraudulent cellular calls. Neither claim is correct. As MCI (p. 12) notes, cellular carriers generally do not send IXCs the ANI information digits which identify a call as cellular.⁷³ Even if they do, however, an IXC has no independent capability either to validate those calls or to determine whether they are fraudulent. On the other hand, cellular carriers typically perform a validation on every call before handing it off to a LEC or IXC. No IXC has similar capabilities.

In fact, IXCs' capabilities to monitor cellular calls are limited. Any monitoring based upon a "cellular

⁷⁰ See AT&T, pp. 30-31. McCaw (p. 14) notes that LECs should share in liability for cellular fraud losses that are attributable to their actions. AT&T agrees, if the cellular carrier can demonstrate that a LEC's actions caused, or contributed to, such fraud.

⁷¹ CTIA, p. 12.

⁷² McCaw, p. 12.

⁷³ See also Sprint, p. 13.

profile"⁷⁴ could not determine whether a specific call is being placed from a legitimate cellular phone or an illegally counterfeited one. Moreover, even if an IXC receives two simultaneous calls using the same MIN, both calls may be legitimate, because cellular services often permit three-way calling. Thus, IXC monitoring can only be ancillary to the primary responsibility of the cellular carriers.

Contrary to the arguments of SBC (p. 10), such liability is neither a subsidy to IXC customers nor unjustified. Cellular carriers, not IXCs, alone control the point of entry into the public network where cellular fraud occurs.⁷⁵ Cellular carriers and their customers alone benefit from the unique capabilities and conveniences of cellular services, and they should bear the costs of those services, including the attendant fraud losses. IXCs and their customers should not be obliged to subsidize those losses.⁷⁶

⁷⁴ See Sprint, p. 13.

⁷⁵ SBC (p. 3) applies the identical standard itself in the context of PBX fraud, noting that PBX customers should be responsible for such fraud because "[t]hese customers alone control the use of their equipment" (emphasis in original).

⁷⁶ NCRA (pp. 4-5) suggests that the Commission adopt a rule absolving "switchless" cellular resellers from any liability for fraud. AT&T opposes this suggestion. Even if these resellers were viewed as mere "customers" (which they are not), they must accept liability not only for their own actions but also for the actions of their end

V. LECS SHOULD RECEIVE ADDITIONAL INFORMATION FROM IXCS
AND SHOULD THEREAFTER BE RESPONSIBLE FOR FRAUDULENT USE
OF THEIR CALLING CARDS.

The comments support AT&T's position (p. 32) that LECs currently have few, if any, economic incentives to make significant improvements in the fraud control processes for their LIDBs. LECs collect LIDB charges and access charges on all calls billed to LEC cards, whether or not the carrier accepting the card collects any payment.⁷⁷ LECs also collect the vast majority of the billing and collection charges for calls charged to their cards.⁷⁸ Nevertheless, the limitation of liability provisions in LEC LIDB tariffs allow the LECs to avoid virtually all liability for IXC fraud associated with their cards.

This is a serious deficiency, because LIDB is the only validation data base available to IXCs for the validation of LEC calling cards, and the LECs are uniquely in control of the LIDBs and their accuracy.⁷⁹ In addition,

(footnote continued from previous page)

user customers, who have no direct relationship with the facilities-based cellular carriers.

⁷⁷ See MCI, pp. 13-14; TFS, p. 11.

⁷⁸ TFS, p. 11.

⁷⁹ Id., p. 13. LIDB is also the database that IXCs must rely upon to determine whether customers have ordered BNS to screen out "ordinary" (i.e. non-payphone) collect and third number calls. For the reasons explained in Sections III and V, LECs should be responsible to IXCs for failures of their BNS capabilities on such calls.

fraud relating to the use of LEC cards is very high. As AT&T notes (pp. 9 n.7, 32), the fraud it experiences from LEC card losses is about five times the losses it experiences from PBX fraud.⁸⁰ In addition, AT&T's fraud losses associated with LEC cards are disproportionately high compared to the fraud losses on AT&T's proprietary cards.⁸¹

The Pennsylvania PUC (p. 12) recognizes that "[c]urrent practices . . . provide virtually no incentive to the LEC to ensure that LIDB information is both up-to-date and accurate." Therefore, it recommends that "LIDB providers should have incentives to make LIDB as effective as possible." LinkUSA (p. 7) agrees that limiting LEC liability provides the LECs with no incentives "to maximize the effectiveness of LIDB as a fraud control tool."⁸²

⁸⁰ CompTel (p. 7) is wrong that AT&T receives discriminatory treatment in connection with LEC card traffic under its Mutual Honoring Agreements ("MHAs") with LECs. The Commission has already required all LECs who have MHAs with AT&T (or any other IXC) to make comparable arrangements available to other carriers who request them. Policies and Rules Concerning Local Exchange Carrier Validation and Billing Information for Joint Use Calling Cards, CC Docket No. 91-115, Report and Order and Request for Supplemental Comment ("LEC Joint Use Card Order"), released May 8, 1992, ¶ 36.

⁸¹ See also TFS, p. 10 (most 0+ fraud involves LEC calling cards).

⁸² See also MCI, p. 14; TFS, pp. 12, 14. TFS (p. 12) also describes numerous problems IXCs have experienced with LIDB operators in the IXCs' efforts to implement fraud controls.

Furthermore, the Commission itself has rejected the claims⁸³ that LIDB validation services are not intended as fraud control devices. In its recent LEC LIDB Order, the Commission expressly found that fraudulent use of the network involves serious public policy issues and that "the evaluation of the creditworthiness of an end user and prevention of fraud are at the very heart of why a customer orders LIDB service."⁸⁴

In its comments (pp. 31-35), AT&T offers a proposal that will both enable and encourage the LECs to provide more effective LIDB services, and also provide IXCs with incentives to use such services. Under this proposal, IXCs would be required to provide LECs with information that will improve the fraud detection capabilities of their LIDB services by attempting a LIDB query on every call they propose to bill to a LEC card, and also by offering both calling and called number information on each validation attempt. As compensation for the IXCs (and as an incentive to the LECs), IXCs would be reimbursed by the LEC for any fraud on calls for which it met the above criteria. IXCs would remain liable, however, if they do not comply with these requirements.

⁸³ E.g., Ameritech, p. 7; SBC, 11.

⁸⁴ Local Exchange Carrier Line Information Database, CC Docket No. 92-24, released August 23, 1993 ("LEC LIDB Order"), ¶ 28.

AT&T agrees with the LECs and other parties who acknowledge that LIDB fraud prevention capabilities could be improved if all carriers validate each call they intend to bill to a LEC card, including all sequence calls.⁸⁵ Bell Atlantic (p. 7) notes that many IXCs do not currently query a LIDB on all such calls. AT&T's proposal would provide IXCs with incentives to perform such queries. This, in turn, would increase the LECs' ability to perform LEC card velocity checks for all LIDB users.

AT&T also agrees with the commenters who suggest that IXCs should provide the LECs with information about the calling and called numbers for each LIDB query.⁸⁶ Such information will give LECs additional abilities to detect fraud, based upon the origination and destination points of call attempts. Rather than charging for such information, however,⁸⁷ IXCs who provide this data should, as compensation, be permitted to obtain reimbursement from the

⁸⁵ See, e.g., AT&T, p. 32; Pacific, p. 19; PaPUC, p. 12; Sprint, p. 18.

⁸⁶ See, e.g., Bell Atlantic, p. 8; Ameritech, p. 6; Pacific, pp. 16-17; USIN, p. 3; PaPUC, p. 13; Sprint, p. 18. Such information should, of course, be used by the LECs only in connection with fraud-related activities (see Sprint, p. 19 n.17; TFS, p. 15).

⁸⁷ See PaPUC, p. 13; LinkUSA, p. 6.

LECs for any fraud losses associated with the use of their cards.⁸⁸

AT&T's proposal seeks to increase the LECs' capabilities to prevent fraud, and then to provide them with incentives to implement those capabilities effectively and reliably. Contrary to the claims of SBC (p. 12), this proposal is not an attempt "to shift some of the burden [of LEC card fraud losses] to parties who are in no position to stop the fraud." Indeed, Bell Atlantic (p. 3 n.3) recognizes that LECs have an important role in preventing fraud on their cards, and BellSouth (p. 13) acknowledges that LECs have a "responsibility to provide a validation service that is essentially error free."

The Commission has already recognized the LECs' unique status in connection with the issuance of calling cards.⁸⁹ That status has enabled the LECs to market enormous numbers of calling cards to their customers, largely upon the basis that they can be accepted on all types of calls. This, in turn, has created an expectation that LEC cards will be accepted by all IXCs and a substantial demand (and need) for LEC LIDB validation

⁸⁸ See also MCI, p. 14; Sprint, p. 19 (LECs who receive call detail information should assume additional responsibility for fraud); TFS, p. 15 n.8 (LEC assumption of liability could provide an incentive for IXCs to provide call detail information).

⁸⁹ LEC Joint Use Card Order, ¶¶ 19, 25.

services.⁹⁰ Assuming that IXCs provide the LECs with the data they need to improve their fraud detection capabilities, it is appropriate to make the LECs responsible for the fraud that results from the use of their cards. TFS (p. 14) correctly states that such liability will encourage LECs to be more aggressive in monitoring card usage and deactivating cards that may be subject to fraud abuse. It may also encourage the LECs to create more realistic guidelines for the issuance of calling cards that would provide greater protection for all carriers and their customers.

Contrary to the claims of SBC (p. 12) and other LECs,⁹¹ there is no reason to assume that the LECs' costs of providing LIDB services and the associated fraud protections for IXCs would necessarily increase after the LECs receive and implement the additional call information from the IXCs. If, however, the costs of reimbursing IXCs for such fraud remain substantial even after the LECs improve their systems commensurate with the receipt of such new information,⁹² LECs could seek cost-based increases in their LIDB rates to cover those additional expenses.

⁹⁰ See TFS, p. 11.

⁹¹ E.g., Bell Atlantic , p. 5.

⁹² See Sprint, p. 17.

- 35 -

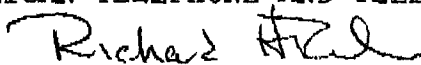
CONCLUSION

Telecommunications fraud is a serious and costly problem. Adoption of the proposals herein and in AT&T's comments will provide customers with important information about telecommunications fraud, provide substantial incentives to all parties to implement solutions that will reduce such fraud, and reasonably assign the financial responsibility for the fraud which occurs.

Respectfully submitted,

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

By:



Mark C. Rosenblum
Robert J. McKee
Richard H. Rubin

Its Attorneys

Room 3244J1
295 North Maple Avenue
Basking Ridge, New Jersey 07920
(908) 221-4481

Dated: February 10, 1994

ATTACHMENT A

PARTIES FILING COMMENTS IN CC DOCKET NO. 93-292

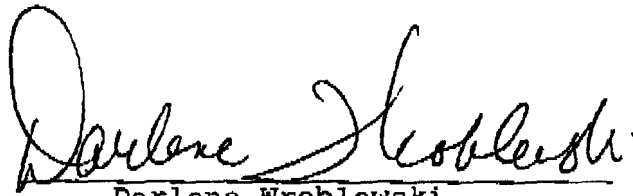
Ad Hoc Telecommunications Users Committee ("Ad Hoc")
Advanced Micro Devices
Aeronautical Radio, Inc. ("ARINC")
AgriBank
American Petroleum Institute ("API")
American Public Communications Council ("APCC")
Ameritech Corporation
AmSouth Bank of Florida
Arizona and Nevada Payphone Associations
Association of College and University Telecommunications
Administrators ("ACUTA")
Bell Atlantic
Bellsouth Telecommunications, Inc. and BellSouth Cellular
Corporation ("BellSouth")
Bessemer and Lake Erie Railroad Co.
BHK & R, Inc.
Brunschwig & Fils, Inc.
Cellular Telecommunications Industry Association ("CTIA")
Central Products Company
Communications Managers Association, the New York Clearinghouse
Association and The Securities Industry Association ("CMA")
Competitive Telecommunications Association ("Comptel")
Crawford & Company
Delaware Valley Medical Center
El Paso Water Utilities -Public Service Board
Ericsson Corporation
Facility Operations Group
Flex Communications ("Flex")
Florida Pay Telephone Asso., Inc. ("FPTA")
Florida Public Service Commission ("FPSC")
FMC Corporation ("FMC")
Global Definity Users Group
GTE Service Corporation ("GTE")
Greeley Medical Clinic, P.C.
Green Point Savings Bank
Halliburton Company
HIMONT U.S.A. Inc.
Independent Payphone Association of New York ("IPANY")
Indiana University -
Interexchange Carrier Industry Committee Toll Fraud
Subcommittee ("TFS")
International Communications Association ("ICA")
Kansas Turnpike Authority
Keystone
King County Fire Protection District No. 39
Kirkland & Ellis
LEGENT Corporation

Leucadia National Corporation and American Investment Bank, NA
Liberty Diversified Industries
LinkUSA Corporation
LTV Steel Company -Technology Ctr.
M.D. Health Plan
McCaw Cellular Communications and McCaw Cellular Communications,
Inc. ("McCaw")
MCI Telecommunications Corp. ("MCI")
Metro-North Commuter Railroad (Metro-North")
Mid-America Group
Midwest Express Airlines, Inc.
Milbank, Tweed, Hadley & McCloy
National Cellular Resellers Association ("NCRA")
National DEFINITY® Users Group, Inc. ("NDUG")
National Telephone Association
New Jersey Payphone Association ("NJPA")
New York City Department of Telecommunications and Energy
North American Telecommunications Association ("NATA")
Northern Telecom Inc.
Northrup King Company
NYNEX Corporation
O'Brien Engineering, P.C.
OBICI Hospital of NY, Inc.
Pace Foods, Ltd.
Pacific Bell and Nevada Bell ("Pacific")
Pennock
Pennsylvania Public Utilities Commission ("PaPuc")
Pinella County Florida-Board of Commissioners
Planned Parenthood of New York City, and Reynolds and
Reynolds ("Planned Parenthood")
Puerto Rico Telephone Company ("PRTC")
Quantum Logic, Inc.
Rochester Telephone Corporation ("RTC")
South Seas Resorts Company
Southern New England Telecommunications Corp. ("SNET")
Southwestern Bell Corporation and Southwestern Bell
Telephone Co. ("SBC")
Specialized Bicycle Components
Sprint Corporation
State of South Carolina Office of Information Resources
Stepehn Satchell
Tele-Communications Association ("TCA")
Telecommunications Resellers Association
Teleport Communications Group ("Teleport")
Thomas Hospital
United Fire & Casualty Company
United States Telephone Association ("USTA")
University Microfilms, Inc.
US Intelco Networks, Inc. ("USIN")
US West Communications
USL Capital
Utilities Telecommunicaitons Council ("UTC")

Vanguard Cellular Systems, Inc.
West Georgia Medical Center
Westvaco-Envelope Division
William C. Brown Communications, Inc.
Wiltel, Inc.
Xiox Corporation

CERTIFICATE OF SERVICE

I, Darlene Wroblewski, hereby certify that a true copy of the foregoing "Reply" was served this 10th day of February 1994 by first-class mail, postage prepaid, upon the parties listed on the attached Service List.



Darlene Wroblewski

Attachment

SERVICE LIST

David Cossan
National Telephone Cooperative Assoc.
2626 Pennsylvania Avenue, N.W.
Washington, D.C. 20037

Douglas R. Brent, Esq.
9300 Shelbyville Rd., Suite 700
Louisville, KY 40222
Attorney for Interexchange Carrier
Industry Committee Toll Fraud
Subcommittee

Linda Kent
United States Telephone Assoc.
1401 H Street, N.W., Suite 600
Washington, D.C. 20005-2136

Charles C. Hunter
Kelly, Hunter, Mow & Povich, P.C.
1133 Connecticut Ave., N.W. 7th Floor
Washington, D.C. 20036
Counsel for Telecommunications
Resellers Assoc.

Genevieve Morelli
Competitive Telecommunications Assoc.
1140 Connecticut Ave., N.W.,
Suite 220
Washington, D.C. 20036

Jeffrey L. Sheldon
Sean A. Stokes
Utilities Telecommunications Council
1140 Connecticut Ave., N.W.
Suite 1140
Washington, D.C. 20036

Debra Lagapa, Esq.
Levine, Lagapa & Block
1200 Nineteenth Street, N.W.
Suite 602
Washington, D.C. 20036
Attorneys for The New York
Clearing House Assoc.,
Communications Managers Assoc. and
The Securities Industry Assoc.

Edward R. Wholl
William J. Balcerski
NYNEX Corporation
120 Bloomingdale Rd.
White Plains, NJ 10605

James L. Wurtz
Pacific Bell and Nevada Bell
1275 Pennsylvania Ave., N.W.
Washington, D.C. 20004

Pamela J. Andrews, Esq.
Ameritech Corporation
2000 W. Ameritech Ctr. Drive
Room 4H74
Hoffman Estates, IL 60196-1025

Albert Kramer
Robert Aldrich
Keck, Mahin & Cate
1201 New York Ave., N.W.
Penthouse Suite
Washington, D.C. 20005-3919
Attorneys for North American
Telecommunications Assoc.

Brian R. Moir
1255 23rd Street, N.W., Suite 800
Washington, D.C. 20037-1170
Attorneys for International
Communications Assoc.

Wayne V. Black
C. Douglas Jarrett
Keller and Heckman
1001 G Street, N.W., Suite 500 West
Washington, D.C. 20001
Attorneys for American Petroleum
Institute

R. Michael Senkowski
Jeffrey S. Linder
Wiley, Rein & Fielding
1776 K St., N.W.
Washington, D.C. 20006
Attorneys for Tele-Communications
Assoc.

James S. Blszak
Patrick J. Whittle
Gardner, Carton & Douglas
1301 K Street N.W., Suite 900 East
Washington, D.C. 20005
Attorneys for Ad Hoc
Telecommunications Users Committee

James P. Tuthill
Nancy C. Woolf
Pacific Bell and Nevada Bell
140 New Montgomery St.
Room 1523
San Francisco, CA 94105

Kathryn Marie Krause
US West Communications
1020 19th Street, N.W.
Suite 700
Washington, D.C. 20036

Anne U. MacClintock
Southern New England Telecomm. Corp.
227 Church Street
New Haven, CT 06510

James D. Ellis
William J. Free
Paula J. Fulks
Southwestern Bell Corporation
175 E. Houston
Room 1218
San Antonio, TX 78205

John M. Goodman
Stephen E. Bozzo
Bell Atlantic
1710 H St., N.W.
Washington, D.C. 20006

William B. Barfield
Jim O. Llewellyn
BellSouth Cellular Corporation
1155 Peachtree St., NE
Suite 1800
Atlanta, GA 30367-6000

Michael J. Shortley, III
Rochester Telephone Corporation
180 South Clinton Ave.
Rochester, NY 14646

Joe D. Edge
Elizabeth A. Marshall
Hopkins & Sutter
888 16th Street, N.W.
Washington, D.C. 20006
Attorneys for Puerto Rico
Telephone Co.

Jay C. Keithley
Michael B. Fingerhut
Sprint Corporation
1850 M Street, N.W.
Suite 1110
Washington, D.C. 20036

Mary Sisak
Donald J. Elardo
MCI Telecommunications Corp.
1801 Pennsylvania Ave., N.W.
Washington, D.C. 20006

Albert J. Kramer
Robert F. Aldrich
Dana J. Lesemann
Keck, Mahin & Cate
1201 New York Ave.
Penthouse Suite
Washington, D.C. 20005-3919
Attorneys for American Public
Comm. Council

Kenneth A. Hoffman
Floyd R. Self
Messer, Vicker, Caparello, Madsen,
Lewis, Goldman & Metz, P.A.
P.O. Box 1876
Tallahassee, FL 32302-1876
Attorneys for Florida Pay
Telephone Asso., Inc.

Dennis C. Linken
Stryker, Tams & Dill
Two Penn Plaza East
Newark, NJ 07105
Attorneys for New Jersey Payphone
Assoc.

Robert M. Lynch
Richard C. Hartgrove
Paul Waters
Southwestern Bell Telephone Co.
One Bell Center
Room 3520
St. Louis, MO 63101

M. Robert Sutherland
Richard M. Sbaratta
BellSouth Telecommunications, Inc.
675 W. Peachtree St., NE
Atlanta, GA 30375

David J. Gudino
GTE Service Corporation
1850 M Street, NW
Suite 1200
Washington, D.C. 20036

Robert Cook
US Intelco Networks, Inc.
P.O. Box 2909
Olympia, WA 98507

Shawna L. Barnard
Wiltel, Inc.
One Williams Center
Suite 3600
Tulsa, OK 74172

Craig T. Smith
Sprint Corporation
P.O. Box 11315
Kansas City, MO 64112

Keith J. Roland
Roland, Fogel, Koblenz & Carr
One Columbia Place
Albany, NY 12207
Attorneys for Independent Payphone
Asso. of NY, Inc.

J. Manning Lee
Teleport Communications Group
1 Teleport Drive
Suite 301
Staten Island, NY 10311

Raymond S. Heyman
O'Connor, Cavanaugh, Anderson,
Westover, Killingsworth & Beshears,
P.A.
One East Camelback Rd.
Suite 1100
Phoenix, AZ 85012-1656
Attorneys for Arizona and Nevada
Payphone Associations

William E. Wyrrough, Jr.
Florida Public Service Commission
101 East Gaines St.
Tallahassee, FL 32399

Joel H. Levy
Cohn & Marks
1333 New Hampshire Ave., NW
Suite 600
Washington, D.C. 20036
Attorneys for National Cellular
Resellers Assoc.

R. Michael Sendowski
Katherine M. Holden
Wiley, Rein & Fielding
1776 K Street, NW
Washington, D.C. 20006
Attorneys for McCaw Cellular
Communications

Michael F. Altschul
Cellular Telecommunications Industry
Assoc.
1133 21st St. NW
Third Floor
Washington, D.C. 20036

Steven J. Hogan
President
LinkUSA Corporation
230 Second Street SE
Suite 400
Cedar Rapids, IA 52401

Thomas A. Miller
Northern Telecom Inc.
2221 Lakeside Boulevard
Richardson, TX 75082

Benjamin J. Griffin
Laura Holt Jones
Reed, Smith, Shaw & McClay
1200 18th St., NW
Washington, D.C. 20036
Attorneys for State of South
Carolina-Office of Information
Resources

Eliot J. Greenwald
Julie Arthur Garcia
Fisher, Wayland, Cooper and Leader
1255 23rd St., NW
Suite 800
Washington, D.C. 20037
Attorneys for Quantum Logic, Inc.

E. Lee Kaywork
Cathleen A. Massey
McCaw Cellular Communications, Inc.
1150 Connecticut Ave., NW
Washington, D.C. 20036

Raymond G. Bender, Jr.
J. G. Harrington
Dow, Lohnes & Albertson
1255 23rd St., NW
Suite 500
Washington, D.C. 20037
Attorneys for Vanguard Cellular
Systems, Inc.

John J. Bartlett
Robert J. Butler
Wiley, Rein & Fielding
1776 K Street, NW
Washington, D.C. 20006
Attorneys for Aeronautical Radio,
Inc.

Stephen L. Goodman
Halpin, Temple & Goodman
1301 K St., NW
Suite 1020, East Tower
Washington, D.C. 20005
Attorneys for Northern Telecom Inc.

Linda McHenry-Schmal
Proctor & Associates
15050 Northeast 36th
Redmond, WA 98052-5317

David C. Jatlow
The Ericsson Corporation
2300 N Street, NW
Suite 600
Washington, D.C. 20037

Fred E. Marquis
Pinella County Florida
Board of Commissioners
315 Court Street
Clearwater, FL 34616

Renee A. Seay
President
Global Definity Users Group
901 Thompson Place
Sunnyvale, CA 94088

Joseph Sullivan
Jeffrey Lord
Flex Communications
4 Wells Street
P.O. Box 267
Johnstown, NY 12095-0267

Michael O'Connell
Vice President of Marketing
Xiox Corporation
577 Airport Blvd., Suite 700
Burlingame, CA 94010

Veronica A. Smith
John F. Povilaitis
Maureen A. Scott
Pennsylvania Public Utilities Comm.
P.O. Box 3265
Harrisburg, PA 17105-3265

Randal R. Collet
ACUTA
250 West Main St.
Lexington Financial Center
Suite 2420
Lexington, KY 40507

J. Ethan Jacobs
FMC Corporation
200 East Randolph Drive
Chicago, IL 60601

James P. Gillespie
Kirkland & Ellis
655 Fifteenth Street, N.W.
Suite 1200
Washington, D.C. 20005
Attorneys for FMC Corporation

Renee A. Seay
President
Advanced Micro Devices
901 Thompson Place MS10
Sunnyvale, CA 94088

Keith Frank
The University of Oklahoma
College of Medicine
2808 S. Sheridan Road
Tulsa, OK 74129

National DEFINITY® Users Group, Inc.
P.O. Box 2167
Indianapolis, Indiana 46206-2167

Don Eisenbarth
Technical Services Manager
West Georgia Medical Center
1514 Vernon Road
LaGrange, GA 30240

Captain Mark Mannard
Telecommunications Manager
King County Fire Protection District
No. 39
Federal Way Fire Dept.
31617 1st Avenue South
Federal Way, Washington 98003

John J.O'Brien, P.E.
O'Brien Engineering, P.C.
220 Maple Ave - Suite 205
Rockville Centre, NY 11570

Richard K. Bernard
Metro-North Commuter Railroad
347 Madison Avenue
New York, NY 10017

Cathleen M. Mulrooney
HIMONT U.S.A. Inc.
Three Little Falls Centre
2801 Centerville Rd.
P.O. Box 15439
Wilmington, DE 19850-5439

Susan Miller
Thomas J. Dunleavy
New York City Department of
Telecommunications and Energy
75 Park Place
New York, NY 10007

John A. Anderson
Melyssa D. Davidson
Van Cott, Bagley, Cornwall & McCarthy
P.O. Box 45340
Salt Lake City, Utah 84145-0450
Attorneys for Leucadia National
Corporation and American Investment
Bank, NA

Jeffrey L. Sheldon, Esq.
Sean A. Stokes, Esq.
Utilities Telecommunications Council
1140 Connecticut Ave., N.W.
Suite 1140
Washington, D.C. 20036

Thomas K. Crowe
Michael G. Jones
Irwin Campbell & Crowe
1320 18th St., N.W., Suite 400
Washington, D.C. 20036
Attorneys for Planned Parenthood
of New York City, and Reynolds and
Reynolds

Denise M. Munro
Diana Tipton
Doug Clark
Halliburton Company
5000 South Bowen Rd.
Arlington, TX 76017

Sally York, Manager
Communications Systems
USL Capital
733 Front St.
San Francisco, CAA 94111

John E. Balliew, P.E.
Environmental Compliance Mgr.
El Paso Water Utilities
Public Service Board
P.O. Box 511
El Paso TX 79961-0001

Caryl Meeks
Telecommunications Mgr.
M.D. Health Plan
6 Devine St.,
North Haven, CT 06473-2174

Gail Mayerchak
Liberty Diversified Industries
5600 North Highway 169
Minneapolis, Minnesota 55428

Susan M. Green
Technical Analyst
AgriBank
375 Jackson St.
Box 64949
St. Paul, MN 55164-0949

Gabriele Johnson
Midwest Express Airlines, Inc.
4915 South Howell Ave.
Milwaukee, Wisconsin 53207

J. Farrington
BHK & R, Inc.
300 Olympic Place
7825 Washington Ave. South
Minneapolis, MN 55439-2433

Anne M. Cosmai
Telecommunications Mgr.
Milbank, Tweed, Hadley & McCloy
1 Chase Manhattan Plaza
New York, NY 10005-1413

Nance R. West
Telecommunications Supervisor
OBICI Hospital
1900 North Main Street
P.O. Box 1100
Suffolk, Virginia 23439-1100

Rosemary Staples
AmSouth Bank of Florida
P.O. Box 12790
Pensacola, FL 32501

J. B. Hurt
Telecommunications Specialist
Bessemer and Lake Erie Railroad Co.
135 Jamison Lane
P.O. Box 68
Monroeville, PA 15146

Raymond J. Dzek
Operations Supervisor
Specialized Bicycle Components
15130 Concord Circle
Morgan Hill, CA 95037

Sandy Till
Telecommunications Mgr.
William C. Brown Communications, Inc.
2460 Kerper Blvd.
Dubuque, Iowa 52001

Peter J. Guile
Mgr., Network Services
Crawford & Company
Data Center
4680 N. Royal Atlanta Dr.
Tucker, GA 30084

Thomas A. Rogers, P.E.
Communications Engineer
Kansas Turnpike Authority
9401 East Kellogg
Wichita, Kansas 67207-1804

Thomas Logue
Telecommunications Mgr.
Pennock
3027 Stokley St.
Philadelphia, PA 19129-1188

Deborah K. Augerstein
Telecommunications Mgr.
The Greeley Medical Clinic, P.C.
1900 16th St.
Greeley, Colorado 80631

Gerald F. Gragett
Telecommunications Mgr.
Brunschwig & Fils, Inc.
75 Virginia Rd.
N. White Plains, NY 10603

Sharon W. Garver
Mgr., Voice/Video Telecommunications
LEGENT Corporation
7965 N. High St.
Columbus, OH 43235

Brian P. Garavuso
Director of Corporate Services
South Seas Resorts Company
12800 University Drive, Suite 350
Fort Myers, FL 33907

Anthony Guarisco, Jr.
Director of Communications
Thomas Hospital
750 Morphy Ave.
P.O. Drawer 929
Fairhope, Alabama 36533

Donald Giardino
Manager, Facility Services
Keystone
101 Main St.
Cambridge, MA 02142-1519

Colleen M. Fox
The Green Point Savings Bank
41-60 Main St.
Flushing, NY 11355-3820

Ms. Kyle Wickemeyer-Hardy
Indiana University
School of Education
W.W. Wright Education Bldg.
Bloomington, Indiana 47405-1006

Mary Lou Zecker
Director of Communications
Delaware Valley Medical Center
200 Oxford Valley Road
Langhorne, PA 19047

Mary L. Dewey
Northrup King Company
7500 Olson Memorial Highway
Golden Valley, MN 55427

United Fire & Casualty Company
118 Second Ave., S.E.
P.O. Box 73909
Cedar Rapids, Iowa 52407

Central Products Company
P.O. Box 330
748 Fourth St.
Menasha, Wisconsin 54952

Ina Blackwell
Pace Foods, Ltd.
P.O. Box 12636
San Antonio, TX 78212-0636

Kitty J. Leemon
University Microfilms, Inc.
300 North Zeeb Rd.
Ann Arbor, MI 48106-1346

Sheryl Reifschneider
LTV Steel Company
Technology Ctr.
6801 Brecksville Rd.
Independence, OH 44131

Michael R. Oliver
Telecommunications Manager
The Mid-America Group
Regency West 4
4700 Westown Parkway, Suite 303
West Des Moines, Iowa 50266-6728

Stepehn Satchell
P.O. Box 6900
Incline Village, NV 89450

Richard E. Larned
Technical Services Supervisor
Westvaco
Envelope Division
2001 Roosevelt Ave.
Box 3300
Springfield, MA 01101-3300

Facility Operations Group
2730 South Hardy Drive
Suite 1
Tempe, Arizona 85282

Richard Kuehn
RAK Associates
17894 Clifton Park Ave.
Cleveland, OH 44107

Ed Simonson
TeleDesign Management, Inc.
1633 Bayshore Highway, Suite 120
Burlingame, CA 94010

Peter M. Phillipps
The Stop & Shop Companies, inc.
P.O. Box 369
Boston, MA 02101